

CLAIMS

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1. An induction heating apparatus comprising an induction heating coil for induction heating a matter to be heated, a top plate provided between said matter to be heated and said heating coil, driving means for supplying a high-frequency current to said induction heating coil, and an electrostatic shield having conductivity, provided between said top plate and said induction heating coil and connected to a low-potential portion, wherein a stationary plate having electrical insulation is provided between said top plate and said induction heating coil, said stationary plate is provided with said electrostatic shield and connection portions connected to said electrostatic shield, and said electrostatic shield is connected to said low-potential portion via said connection portions.

2. An induction heating apparatus in accordance with claim 1, wherein said connection portions are securely connected to said electrostatic shield

3. An induction heating apparatus in accordance with claim 2, wherein said connection

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portion is integrated with a connection terminal that can be connected to and disconnected from a connection wire, and said connection terminal is configured so as to be secured to said stationary plate.

4. An induction heating apparatus in accordance with any one of claims 1 to 3, wherein a cover for stationary plate having electrical insulation and covering said electrostatic shield is provided on the opposite side of said stationary plate.

5. An induction heating apparatus in accordance with claim 4, wherein said cover for stationary plate is firmly secured to said stationary plate so as to cover part or whole of said electrostatic shield and said connection portions.

6. An induction heating apparatus in accordance with claim 4, wherein an insulator in a half-cured state is used for at least one of said stationary plate and said cover for stationary plate, and heated and cured after assembly to attain integration.

7. An induction heating apparatus in accordance with claim 6, wherein raw mica containing

an adhesive is used for at least one of said stationary plate and said cover for stationary plate, and heated after assembly to attain integration.

8. An induction heating apparatus in accordance with claim 6, wherein inorganic fiber containing an adhesive is used for at least one of said stationary plate and said cover for stationary plate, and heated after assembly to attain integration.

9. An induction heating apparatus in accordance with any one of claims 1 to 3, wherein said connection portion is provided close to the winding on the low-potential side, instead of the winding on the high-potential side, of said induction heating coil, with reference to the potential to which said electrostatic shield is connected.

10. An induction heating apparatus in accordance with claim 3, wherein part of said connection terminal is bent and said connection terminal is secured to said stationary plate.

11. An induction heating apparatus in accordance with claim 3, wherein said connection terminal is securely connected to said electrostatic

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shield using a conductive adhesive.

12. An induction heating apparatus in accordance with claim 3, wherein said connection terminal is retained in said induction heating coil base for supporting said induction heating coil.

13. An induction heating apparatus in accordance with any one of claims 1 to 3, wherein a slit portion is provided at least at one position of said stationary plate from its external circumference.

14. An induction heating apparatus in accordance with claim 4, wherein a slit portion is provided at least at one position of said cover for stationary plate from its external circumference.

15. An induction heating apparatus in accordance with claim 3, wherein said connection terminal is secured to said stationary plate with a crimping member and electrically connected to said electrostatic shield.